REMARKS

This Amendment is in response to the Office Action mailed September 13, 2000 and the Advisory Action mailed December 18, 2000. In the Office Action and the Advisory Action, the Examiner rejected claims 1-18 under 35 U.S.C. §103. Applicant has canceled claim 19 and amended claims 1, 6, 7, 13 and 18. Claims 1-18 remain pending in the application.

REJECTION UNDER 35 U.S.C. § 103

The Examiner rejects claims 1-4 and 7-18 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,737,407 issued to Graumann (hereinafter "Graumann") in view of U.S. Patent No. 5,311,588 issued to Polcyn et al. (hereinafter "Polcyn") claim 5 under 35 U.S.C. §103 as being unpatentable over Graumann and Polcyn and further in view of U.S. Patent No. 5,657,422 issued to Janiszewski et al (hereinafter "Janiszewski") and claim 6 under 35 U.S.C. §103 as being unpatentable over Graumann and Polcyn and further in view of U.S. Patent No. 5,664,052 issued to Nishiguchi et al (hereinafter "Nishiguchi"). Applicant respectfully disagrees.

Regarding claim 1, in the Office Action explicitly states that neither Graumann nor Polcyn teach or suggest normalizing the ratio. In contrast, the claimed invention recites a normalized ratio, as set forth in independent claim 1. Since neither Graumann nor Polcyn teach or suggest normalizing the ratio, applicant respectfully requests that the § 103 rejection of claim 1 and the claims dependent thereon, claims 2-5, be withdrawn.

Regarding claim 5, the Examiner suggested that it would have been obvious to modify the proposed combination of Graumann and Polcyn to conduct a weighted average as taught by Janiszewski. As set forth above, neither Graumann nor Polcyn teach or suggest a normalized peak-to-mean likelihood ratio. Janiszewski teaches an average frame energy (see column 4, line 34-35). Otherwise, Janiszewski neither teaches nor suggests a normalized peak-to-mean likelihood ratio. In contrast claim 5 incorporates, from independent claim 1, a normalized peak-

to-mean likelihood ratio. Since the combination of <u>Graumann</u>, <u>Polcyn</u> and <u>Janiszewski</u> neither teaches nor suggests a normalized peak-to-mean likelihood ratio, applicant respectfully requests that the rejection of claim 5 be withdrawn.

Regarding claim 6, the Examiner suggested that it would have been obvious to modify the combination of <u>Graumann</u> and <u>Polcyn</u> to detect a peak to signal variation as taught by <u>Nishiguchi</u>. As set forth previously, <u>Graumann</u> describes a PEAK/MAX ratio (see column 2, line 24). Accordingly, <u>Graumann</u> describes a denominator being a MAX. Otherwise, <u>Graumann</u> neither suggests nor describes a denominator of the ratio being the difference between a maximum averaged peak-to-mean ratio and a minimum averaged peak-to-mean ratio.

Moreover, as admitted in the final Office Action, <u>Polcyn</u> calculates a peak-to-mean power ratio defined as:

$$PAR = \frac{(V_{max})^2}{\sum_{1}^{N}(V_i)^2 / N} \text{ (see Figure 4).}$$

Accordingly, <u>Polcyn</u> describes a denominator being a summation of the square of a voltage divided by N. Otherwise, <u>Polcyn</u> neither suggests nor describes a denominator of the ratio being the difference between a maximum averaged peak to-mean-ratio and a minimum averaged peak-to-mean ratio.

<u>Nishiguchi</u> calculates a peak to standard deviation ratio, as admitted by the Examiner. Accordingly, <u>Nishiguchi</u> describes a denominator being a standard deviation. Otherwise, <u>Nishiguchi</u> neither suggests nor describes a denominator of the ratio being the difference between a maximum average peak to mean ratio and a minimum averaged peak-to-mean ratio.

In contrast to the suggested combination of <u>Graumann</u>, <u>Polcyn</u> and <u>Nishiguchi</u>, the present invention recites a denominator of the ratio being the difference between a maximum

averaged peak-to-mean ratio and a minimum averaged peak-to-mean ratio, as set forth in independent claim 1.

Moreover, the suggested combination calculates a standard deviation to normalize the ratio. As is well known, calculating a standard deviation requires calculating a square root and repeatedly calculating squares. Since calculating a square root and repeatedly calculating squares each require numerous processor clock cycles, the proposed combination yields a slow calculation. In contrast, the present invention determines a difference, as set forth in independent claim 1. Because determining a difference only requires a few clock cycles, the present invention provides the unexpected result of a faster determination of whether a current audio frame represents a voice signal.

Since the proposed combination of Graumann, Polcyn and Nishiguchi neither suggests nor describes a denominator of the ratio being the difference between a maximum average peak to mean ratio and a minimum averaged peak-to-mean ratio, applicant respectfully requests that the § 103 rejection of claim 6 be withdrawn. In the alternative, since the claimed invention provides the unexpected result of a faster determination of whether a current audio frame represents a voice signal, applicant respectfully requests that the § 103 rejection of claim 6 be withdrawn

For reasons similar to those set forth above, applicant respectfully requests that the § 103 rejection of claims 7-18 be withdrawn.
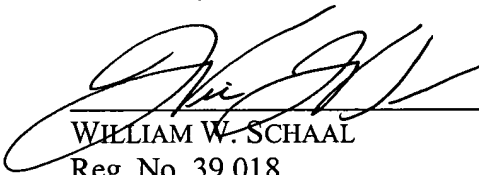
CONCLUSION

In view of the amendments and remarks made above, it is respectfully submitted that all pending claims are in condition for allowance, and such action is respectfully solicited. It is respectfully requested that the Examiner contact the undersigned attorney in order to facilitate prosecution of the subject application.
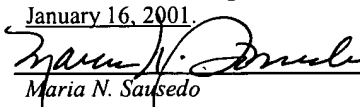
Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: January 16, 2001

WILLIAM W. SCHAAL
Reg. No. 39,018